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Nanotechnology

Dutch Government to Develop Occupational Exposure Limits for Common Nanoparticles

BRUSSELS—The Dutch government is beginning work to determine acceptable levels of nanoparticles in the workplace following the July passage of parliamentary motions on protection of workers' health, the coordinator for a government-funded nanotechnology research agency told BNA Sept. 9.

After roughly a year of discussions among government agencies and public interest groups, the Dutch Parliament asked the agency KIR nano, which operates under the National Institute for Public Health and the Environment (RVIM), to develop "nano reference values"—preliminary values that would eventually be used to set occupational exposure limits for frequently used nanoparticles—by the end of this year.

Parliament also urged the government to demand risk assessments from manufacturers, create an obligation to notify the public about the use of nanoparticles in products, and assign an institute to research nanoparticle-containing products on the market.

Maaike van Zijverden, a coordinator for KIR nano, told BNA, "We will evaluate whether it's possible with the limited scientific data that are available to derive preliminary values." While such reference values would not be as "scientifically hard" as one might want, they would be "the state of the art, the state of science, as it is," she said.

Once limit or reference values are formulated, employers in the Netherlands will be obliged to adhere to them, Wim van Veelen of trade union organization FNV, which lobbied for the motions, told BNA Sept. 2.

"It's very important for workers ... to know at what level companies take risks that become too high," van Veelen said. "Then it's more easy to say, 'Listen, my dear employer, you are now exposing people to unacceptable levels of nanoparticles.' "

Government Adopts Precautionary Approach

Nanotechnology risk research—which includes information exchange with other scientific bodies under the European Union and the Organization for Economic Cooperation and Development—is a necessary first step before other requirements, such as industry risk assessments, can be realized, van Zijverden said.

"It may be a bit much to expect from industry to come up with the answers about how to do the risk assessment when science isn't even conclusive about how to do [them]," van Zijverden said.

Since research on the health effects of nanotechnologies is scarce, the Dutch government has adopted a precautionary approach that treats nanoparticles as hazardous substances, according to Pieter van Broekhuizen, coordinator of the nongovernmental consortium NanoCap. All stakeholders, including industry and labor groups, have agreed to this approach, he said.

Meanwhile, the government is using advice developed by the British Standards Institute and the U.S. National Institute for Occupational Safety and Health as a guide, van Broekhuizen said.

Those two institutes have proposed general benchmarks to use for untested materials based on materials, such as asbestos, that are better understood (32 CRR 102, 1/28/08).

Survey, Industry Action Planned

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Nc governmental agencies and industry groups are also contributing to the growing research efforts on nanotechnologies. TNO, an independent institute conducting nanotechnology risk research, and RVIM will begin the week of Sept. 14 to survey "end-users" in industries including paint, cleaning, and construction to develop best practices for companies.

The survey will look at how many companies work with nanotechnologies and how many people are potentially exposed to nanoparticles, among other questions, Marieke op de Weegh-Nieboer of TNO told BNA Sept. 9. The agencies are already evaluating the results of a 2008 survey of risks in nanoparticle production.

Industry groups have recently started pilot projects to share information on risk management. The paint and printing industries, for example, are sharing information on the "presence and exposure to nanoparticles in the production chain," op de Weegh-Nieboer said. A project to help small and medium sized enterprises with nano-related questions is also in the works.

TNO is currently participating in negotiations for a public-private nanotechnology risk research initiative expected to start in 2010.

While the Parliament motions provide new obligations for companies in the Netherlands, no new nanoparticle-related legislation is expected. Instead, nanoparticles will be managed under the EU regulation (EC 1907/2006) governing the registration, evaluation, authorization, and restriction of chemical substances (REACH), op de Weegh-Nieboer said (33 CRR 555, 6/1/09).

By Lisa Nuch Venbrux

A March 2009 report by the Social Economic Council of the Netherlands, which provided the basis for the parliamentary motions, is available at http://www.ser.nl/en/Publications/Publications/2009/2009_01.aspx.

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